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Distributed event-triggered consensus for nonlinear multi-agent systems subject to cyber attacks

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Highlights

- The event-triggered communication scheme is first applied to the distributed consensus controller design of MASs subject to cyber attacks. The uniform ultimate boundedness of the tracking errors has been achieved based on the communication restoration mechanism.
- The event-triggered controller scheme proposed in this paper avoids continuous communications among follower agents, which is different from the scheme in some recent results.
- Compared to the communication topologies that are connected or undirected, the considered directed topology graph in this paper is more general and has wider applications. Moreover, sufficient condition with parameter solved by an optimization problem is presented to ensure that the event-triggered consensus for MASs can be realized, which also guarantees that the MASs have more time to recover communication capabilities after being attacked.

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